

Replace Arc Jet Complex SVS Boiler

RFP Q&A

5/16/2013

Q1: The SF 1442 for the Solicitation states a performance period of 830 calendar days, including options. Section F.3 states a performance period of 730 calendar days, with a performance period extension of 20 calendar days per Option. Please clarify the required performance period, including all Options.

A1: The performance period of the base award is 730 calendar days from notice to proceed. If options are exercised pursuant to the contract, we will add 20 days for each option exercised. The maximum additional days would be 120 calendar days. For example: 6 options exercised will add 120 calendar days, hence, the total contract performance is 850 calendar days should all options be exercised.

Q2: It is unclear where the Cover Letter should be included with the proposal. Section L.14(b) states that (3) volumes shall be included; however, the Proposal Component matrix appears to indicate that (4) separate volumes are required. Please clarify if the Cover Letter should be included as a separate fourth volume, or be included with one of the other three volumes.

A2: The proposal preparation instructions in Section L have been clarified in the final RFP.

Q3: There is no evaluation criteria provided for the items required within the Cover Letter. Please provide information on how the content of the Cover Letter section will be evaluated.

A3: There are no evaluation criteria for the Cover Letter. NASA will review cover letter items to ensure completeness.

Q4: Given the complexity of the proposal response and the amount of information needed to be collected, we formally request an extension of two weeks to the due date of May 24, 2013 as required in the draft RFP.

A4: The Final RFP specifies closing date of 7 June 2013.

Q5: The documents released on April 26th indicate that they are all still in DRAFT format. Please confirm when the final RFP will be released.

A5: The official RFP release date is 8 May 2013 and closes on 7 June 2013.

Q6: It appears that pricing information needs to be included in the Cover Letter binder (Section B, Clause B.1) and in the Price Volume (Attachment J-10). Please confirm that pricing information should be included in two separate binders.

A6: Confirmed to be in both volumes.

Q7: Please confirm if pre-proposal RFI responses will be distributed to all offerors.

A7: Pre proposal RFI responses will be posted to FedBizOpps.Gov.

Q8: Will there be a resume template provided for our proposed key personnel? If not, what other information is requested beyond position descriptions, authority and responsibility on the resume?

A8: No. We do not have a resume template for this procurement.

Q9: Please confirm if it is acceptable to deliver the required electronic copies of the proposal one day after the hard copy deadline.

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A9: No. It is not acceptable. Offerors shall follow the instructions in Section L when submitting proposals.

Q10: Section 1.14, paragraph c. bullet #2 – Will the Contractor’s key personnel be evaluated? If so, please provide the evaluations criteria.

A10: The Government will review offeror’s key personnel to ensure balance of skills and team mix. Key personnel is not an evaluation factor.

Q11: Section 1.14, paragraph h. – Will the Contractor’s Safety and Health Plan be evaluated? If so, please provide the evaluations criteria.

A11: No.

Q12: Section 1.14, paragraph i. – Will the Contractor’s Small Business Subcontracting Plan be evaluated? If so, please provide the evaluations criteria.

A12: No.

Q13: Key Note #16 on Sheet M704 makes reference to a Bid Option #8. This Option does not appear anywhere else in the Solicitation. Please confirm if a bid option related to the anhydrous ammonia system is desired, and if so, revise the Option/CLIN descriptions accordingly.

A13: The anhydrous ammonia system shall be considered part of the base bid. Key Note #16 will be deleted in the upcoming RFP amendment.

Q14: Please confirm if all hazardous material, other than the material identified in the reports issued with the draft RFP, has been or will be removed from Sphere 6 prior to the work of this Solicitation.

A14: Liquid waste inside Sphere 6, as well as the waste in the ancillary tanks below will be disposed of by Government prior to demolition. Government will dispose of any unused caustic material (NaOH) prior to demolition. HS&E Note 5 on G005 address any hazardous materials associated with Sphere 6 itself aside from chemicals that are to be removed by Government.

Q15: Please confirm if all existing hazardous material from the chemical treatment systems in the existing Arc Jet SVS boiler will be removed prior to the work of this Solicitation. If this material was not be removed by others, please provide a complete hazardous materials survey for the demolition work associated with Option 7.

A15: There are three key notes (15-17) on M201 associated with the chemical treatment system. It can be expected that residual chemical solution (quantity unknown but limited to size of pumps and tanks themselves as a worst case quantity scenario) will be found in the chemical feed pumps (Key Note 15) and chemical mixing tanks (Key Note 16). The chemical storage tanks (Key Note 17) are owned by a third-party vendor and thus can be expected to be removed by that vendor and not the contractor. Government will dispose of the two chemical totes prior to exercising Option7.

Q16: Section 1.4 “Building Information Modeling” references a document titled ‘Building Information Modeling Scope of Services and Requirements for Construction Contractor in a Design-Bid-Build Process – Replace Arc Jet Complex SVS Boiler’ dated April 24, 2012; however, the BIM scope of services document issued with the draft RFP appears to be for a design-build project. Please clarify the required BIM guidelines for this proposal, and re-issue appropriate documents if necessary.

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A16: The Government has deleted existing BIM (design-build) guidelines. Offerors shall utilize document titled 'Building Information Modeling Scope of Services and Requirements for Construction Contractor in a Design-Bid-Build Process – Replace Arc Jet Complex SVS Boiler' dated May 10, 2013, which will be incorporated into the upcoming RFP Amendment.

Q17: Please confirm if additional pre-proposal site visits may be requested and considered.

A17: We do not intend to hold another site visit.

Q18: Subsection 3.2.4.10 states that boiler must operate continuously for 14 days. Subsection 3.2.4.14 requires 30 continuous 24 hour operational days prior to final acceptance. It further requires Contractor to provide labor, chemicals Does this mean that Contractor must provide operators and run the new boiler(s) 24 hours per day for 14/30 continuous days and vent all the steam produced?

A18: The tests required for each individual new boiler are as specified in subsection 3.2.4. In addition to the other tests noted in subsection 3.2.4.3.2.4.1, 3.2.4.2 and 3.2.4.3, the Boiler Preliminary Operational Tests noted in subsection 3.2.4.4 have a duration of 2 weeks continuous. It is not intended to have the boilers and burners operating 24 hours a day continuously for 30 days. The Plant Acceptance Operation (PAO) requirement noted in subsection 3.2.4.14 shall be interpreted to mean operation per the normal uninterrupted SVS operating schedule for a 30 day contiguous period. The design load schedule for the SVS is defined in paragraph 1.4.1.1.b. Shutdowns each evening and on weekends, and subsequent startup the next operating day will be required during the PAO. SVS typically operates four days per week (Monday, Tuesday, Thursday and Friday), so there would be a maximum of 18 days of operation (light-off) in a 30 day period. PAO duration is a maximum of 30 contiguous days, or until Government accepts plant operation, whichever occurs sooner.

Q19: Subsection 2.8.1.2 Heater Capacity, requires capacity of 213,000 pounds per hour of softened makeup water. Drawing M601 states capacity of 226,000 pounds per hour. Which is correct?

A19: Both of these mass flow rates correspond to maximum firing rate of the boiler plant (with one standby boiler). At average TDS levels, the makeup water required is 213,000 PPH. However, at higher TDS levels, extra steam blowdown is needed to maintain water quality in the steam drum, necessitating more makeup water. For worst case TDS levels (which is rare), 226,000 PPH is the required makeup water rate. The deaerator heater should be sized for the scheduled flow rate on M601.

Q20: Subsection 2.2.1 Capacity, states that capacity of units shall be 362,388/n gallons of water... Also states peak rate is 25,468/n gph. What does "/n" mean?

A20: The water softener vendor shall provide the required water softener capacity (362,388 gal between regenerations and 25,468 gph peak rate) in (a) a single vessel system or (b) a parallel multiple vessel system with a strict footprint constraint. If 2 or more vessels in parallel are proposed to get the total capacity, or $n = 2$ or more, the capacity of each unit will be $362,388/n$. Same applies to the peak rate.

Q21: Subsection 1.7 Warranty, requires a five (5) year warranty period for all steam plant equipment essential for the production of steam for the steam vacuum system. Please confirm that this warranty is for equipment (boiler, DA, SCR, economizer, etc.) and not piping, valves, fittings, etc.

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A21: Only equipment is referred to in this requirement. Government considers valves to be equipment. Piping and fittings should be covered by the general construction warranty. See Section 01 86 12.07 40, subsection 1.7 for mechanical system warranty.

Q22: Subsection 3.5.1 states that the air pollution control equipment and monitoring system shall be tested. Please confirm that the scope does NOT include a continuous emissions monitoring system.

A22: CEMS is not in scope.

Q23: Subsection 1.5.b states Contractor is to supply: "2 of each part for spare parts inventory." The spare parts data list does not describe in detail the spare parts to be provided nor is it clear if the cost of these spare parts are included in the scope or to be paid for by NASA separately from the contract scope. Please advise.

A23: This requirement is from Section 01 78 00 which is for Closeout Submittals. Actual spare parts required are identified in the technical specifications.

Q24: Water Softener(s) are not identified on the Equipment Schedules. Does NASA have any recommended vendors? Please identify whose water softener was included in the drawings?

A24: The basis of design is the type manufactured by Aqua Pure. The Government does not have recommended vendors.

Q25: Subsection 2.1 states that "All boiler subsystems, such as burner assemblies and SCR shall be fully factory assembled and tested." We do not believe that burner manufacturers nor SCR manufacturers have the ability to perform factory testing. Please delete "and tested" from the scope.

A25: The factory testing requirement will be deleted in the pending RFP amendment.

Q26: Subsection 3.1.3.3 states that the boilers are to be painted with one coat of aluminum heat resisting paint after testing is complete. Is it acceptable to have the boiler manufacturer provide the boilers with this paint rather than re-paint the boilers?

A26: It is acceptable that the second field applied coat required in subsection 3.1.3.3 be applied in the factory in addition to the factory-applied coat required under subsection 3.1.3.1. Factory finished equipment for which the finish has been damaged in the field shall have damaged areas retouched. This will be in the pending RFP amendment.

Q27: Please provide the manufacturer for the basis-of-design boiler package included in the current permitted drawing set.

A27: Please refer to Key Note 1 on M601. The basis of design is the composite of Renteck, Cleaver Brooks (Nebraska), Indeck, and Babcock & Wilcox.

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Q28: Per the Steam Boiler Equipment Schedule on Sheet M601, Nebraska Boiler Co. is listed as an acceptable manufacturer. Please verify that Nebraska Boiler is now Cleaver Brooks Boiler Co., and that Cleaver Brooks is an acceptable manufacturer for this project.

A28: Yes. Cleaver Brooks is the manufacturer of the Nebraska-engineered boiler line, and is an acceptable manufacturer. Acceptable manufacturers are not limited to the four manufacturers listed as the Basis of Design. Please refer to the 'or approved equal' language included in Key Note 1 on M601.

Q29: Please confirm if any existing piping capped off as part of demolition work requires pressure testing and/or special welding inspections after caps or flanges are installed.

A29: Yes. Pressure testing and NDE is required on pressure retaining welds in accordance with Section 40 17 26.0020 and Mechanical General Notes 49 and 50 on M002. Refer to the specified field test and inspection requirements found in the contract documents for the service being capped.

Q30: The drawings do not show piping and other services to be capped as part of the demolition work included in Options 1 & 7. Please confirm service, quantity, and size for all lines to be cut and capped as part of the aforementioned Options. Additionally, please confirm if capped piping requires a blind flange or a welded cap.

A30: NOx scrubber system (Bid Option 1) overhead pipes are to be removed by others as noted on Key Notes 1, 3 and 4 on M202. For Option 7, the major points of disconnection are shown on M201. Capped piping can be blind flange or welded cap, unless otherwise noted. All lines are 6" diameter steel construction.

Q31: Please confirm if any services to be cut and capped as part of Options 1 & 7 require underground capping, complete removal back to origin, and/or corrosion protection. If differing requirements exist for different services, please delineate the extent of cutting and capping/removal required for each service.

A31: The only utility line required capping underground is that for natural gas.

Q32: Please confirm if pressure, x-ray, or both testing methods are required at tie-in welds.

A32: Yes. Hydrostatic test is required on all pressure retaining welds per plans and specs. In addition, provide NDE (non-destructive examination) as required per Section 40 17 26.00 20 for ASME piping, or otherwise specified for non-ASME piping.

Q33: Please confirm if the Commissioning Authority is to be contracted by the prime contractor, or by the Government.

A33: Commissioning Authority is to be contracted by the Government.

Q34: At the site visit, it was mentioned that any changes to the drawings require re-permitting. Please provide the guidelines and approximate timelines for Moffett Field permitting.

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A34: Refer to the APR 8829.1 which establishes the Construction Permit Process and the requirements imposed on all construction activities by the Government. Permit applications are reviewed every week on Wednesday. If determination is 'Revised and Resubmit', the applicant will have to revise their drawings to address the comments and then resubmit the application for review. The review period for the resubmittal is generally a maximum of 10 working days.

Q35: What constitutes a major subcontractor?

A35: For this project, the Offeror will determine who their "Major Subcontractor(s)" are, pursuant to their proposal. Defining the major subcontractor may include, but not limited to the disciplines defined in the RFP.

Q36: Based on the supplied data regarding feed water quality, and using an independent projection schedule, (our proposed/planned water softener) system will provide a hardness of .42 mg/l as Calcium Carbonate. Is this acceptable?

A36: Section 23 52 33.03 20, Steam Boiler System, quantifies water softener performance in paragraph 2.9.8.2 as follows: "Hardness: Maintain hardness of the softened feedwater near zero and in no case allow it to exceed 1 ppm as CaCO₃." The offeror shall verify with the boiler manufacturer water quality requirements for the boiler selected.

Q37: A Header-Lateral-Distributor Head Type is more typically found, and the standard for much larger vessels. A hubbed lateral is more typical or standard for a vessel of 48" diameter. Will NASA accept a hubbed lateral for this application?

A37: Yes, either a hubbed lateral or header lateral is acceptable. Section 23 52 33.03 20, Steam Boiler System, Paragraph 2.9.8 is silent on distributor head type. The header lateral may be more typical of municipal water systems which is why it was stated in Section 22 31 00, Water Softener. The 48" size requirement is the minimum size vessel that would be accepted for a single tank (a parallel system would have multiple small vessels). The design basis assumed the single vessel system to be 72" diameter.

Q38: The water meter specified is one that conforms to AWWA C700 or C701 standards, which is not normal for a water softener boiler feed application. The specified meter can be provided, however it is an expensive upgrade, especially since two (2) will be needed. Is non AWWA water meter acceptable?

A38: Yes, a non-AWWA meter is acceptable.

Q39: A Steel Brine Tank has been specified. Will NASA be receptive to a polyethylene tank as a substitute to the steel tank?

A39: Yes. A polyethylene brine tank is an acceptable substitute for the steel brink tank specified in Section 22 31 00 Water Softener or the FRP tank specified in Section specification 23 52 33.03 20 Steam Boiler System.

Q40: Subsection 3.1.3.2 states that structural supports shall be painted. Can they be galvanized in lieu-of painted?

A40: All bidders are requested to price their bid based on the technical requirements included in the contract documents, including paint requirements.

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Q41: Please provide the design calculations for thermal and dynamic loading of pipe supports typically contained in the Design Analysis.

A41: We have provided design calculations and they are incorporated in Attachment J-24.

Q42: During the site visit, it was mentioned that the relatively new FWDA tank outside of Building N234A will remain. Please provide additional detail on the location of points of removal for piping connected to this tank. Will piping be cut and capped inside or outside of Building N234A?

A42: Refer to Existing DA Tank Disconnection Requirement-Reference Drawings, P211, P301 & P302 (Attachment J-25). Disconnect and blind flange at points annotated on referenced drawings.

Q43: To ensure adequate provisions are included in the project schedule, please provide additional details on the cutover and extent of testing requirements for the new boilers discussed at the site visit. For example, in addition to manufacturer's startup and typical boiler commissioning, will the boilers be required to be run during a live arc jet test?

A43: The tests required for each individual new boiler are as specified in subsection 3.2.4. All of the these individual boiler tests must be completed prior to the Plant Acceptance Operation (PAO). PAO requirements noted in subsection 3.2.4.14 include the following:

- a. PAO duration is a maximum of 30 contiguous days, or until Government accepts plant operation, whichever occurs sooner. The design load schedule for the SVS is defined in (1.4.1.1.b). Shutdowns each evening and on weekends, and subsequent startup the next operating day will be required during the PAO. SVS typically operates four days per week (Monday, Tuesday, Thursday and Friday), so there would be a maximum of 18 days of operation (light-off) in a 30 day period.
- b. PAO shall be conducted by Contractor's staff, until Government acceptance.
- c. PAO shall be directed by authorized Government staff.
- d. PAO shall supply steam to the SVS, unless Government directs new plant to waste steam, when old boiler plant must be used for Arcjet testing during the PAO.
- e. PAO may be used for actual Arcjet tests, when approved by Government.
- f. PAO may be used to provide required training of Government staff.
- g. SVS shall be controlled by Government staff. Any new SVS controls must have performance verification tests completed prior to PAO.

Q44: Please confirm if bulk NH₃ is required to be provided for the new NO_x reduction system, or if this chemical will be furnished by a current NASA contractor.

A44: Contractor is to provide required chemicals per Section 23 52 33.03 20, Steam Boiler System.

Q45: Please confirm if switchgear "SWGR-1" can be shut down to accommodate the installation of the new vacuum circuit breaker feeding new transformer "T312", or if this installation will need to be performed on energized equipment.

A45: Yes, SWGR-1 can be shutdown. Work is not allowed on energized equipment.

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Q46: Please clarify the extent of modeling of existing, non-renovated conditions required by the document “Facility Information Modeling Scope of Services and Requirements for Construction Contractors in a Design-Build Process.” For example, if new work is performed within an existing building, would only the new work be modeled, or would the entire space surrounding the new work also be required to be incorporated into an updated as-built model?

A46: The BIM model provided by the Government establishes the envelope of the extent of the BIM model. Contractor is directed to utilize document titled ‘Building Information Modeling Scope of Services and Requirements for Construction Contractor in a Design-Bid-Build Process – Replace Arc Jet Complex SVS Boiler’ dated May 10, 2013.’

Q47: Please confirm the acceptability of offerors to submit multiple key subcontractors and/or teaming partners (of the same trade), provided all listed key subcontractors and/or teaming partners comply with the past performance criteria of Section L.16.

A47: Yes. That is acceptable.

Q48: Given the new proposal date issued with the RFP, as well as the extensive information required to be obtained from past clients, please confirm if the due date for Past Performance Questionnaires can be extended to May 27, 2013.

A48: Yes. We will extend the due date for receipt of past performance questionnaires to the proposal due date.

Q49: Section M.2 states that "offerors should possess a three-year average experience modification rate (EMR) of less than or equal to 1.00 from question 1 AND a "No" response to questions 2 and 3." Will a three-year average EMR greater than 1.00 render an offer unacceptable?

Will a "Yes" answer to either question 2 or 3 in Attachment J-7 render an offer unacceptable?

A49: Offerors shall refer to Section M, Past Performance Ratings chart.

Q50: The Steam Vent Silencer specified is a 54 VT-32P which is 54” in diameter. However, the stated size of the silencer is 45” per the referenced drawing. **Which is correct 54” or 45”?**

A50: The correct size is 45”. The correct model selection is “MAXIM 45 VT-3”. Although Maxim is basis of design, other manufacturers are acceptable. Other Steam Vent Silencer schedule data to be updated for the correct silencer include the following:

- Pressure Drop: 6 PSI
- Acoustical Performance in dB for each octave band:
 - 62.5 Hz: 22
 - 125 Hz: 33
 - 250 Hz: 46
 - 500 Hz: 56
 - 1K Hz: 60
 - 2K Hz: 55

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4K Hz: 52

8K Hz: 50

Q51: The spec. Section 23 52 33.03 20 page 26 says that the deaerator should be a tray-type DA. However in the equipment schedule M601, it says the deaerator should be a steam atomizer. **Which is correct?**

A51: Deaerator shall be tray type per Section 23 52 33.03 20 page 26, and as noted in equipment schedule on M601 under TYPE.

Q52: Has a Lightning Risk Analysis been performed for the facility? Specifically was the NFPA780 Annex L calculation performed?

A52: Lightning is not considered a risk at Ames and no lightning risk analysis, including NPFA 780 Annex L, was performed for the facility.

Q53: Our Victory Energy boiler is not listed between the other 4 Steam Boilers Equipment Schedule on Sheet M601. But, Key note 1 on M601 refers to the “or approved equal”. By the way, Victory supplied their boilers in the past for NASA in Texas.

We would like to know if we are an approved equal, who do we ask?

A53: Whether the Victory Energy Boiler is an approved equal or not will be determined during the submittal process. The approved equal shall meet all the boiler requirements as specified in the project design criteria, specifications and drawings.
